

REMARKS/ARGUMENTS

In view of the foregoing amendments and the following remarks, the applicant respectfully submits that the pending claims recite statutory subject matter under 35 U.S.C. § 101, are not anticipated under 35 U.S.C. § 102 and are not rendered obvious under 35 U.S.C. § 103. Accordingly, it is believed that this application is in condition for allowance. If, however, the Examiner believes that there are any unresolved issues, or believes that some or all of the claims are not in condition for allowance, the applicant respectfully requests that the Examiner contact the undersigned to schedule a telephone Examiner Interview before any further actions on the merits.

The applicant will now address each of the issues raised in the outstanding Office Action. First, however, the undersigned would like to thank Examiner Nguyen and SPE Stamber for courtesies extended during the telephone interview on July 20, 2006 (referred to as the "telephone interview"). During the telephone interview, the exemplary operation of Figure 16 of the present application were described, claims 1, 7, 19 and 44-46 were discussed, and the Dorosario publication was discussed.

Objection

The abstract stands objected to as being too long. Since the abstract, as amended, is now no more than 150 words, this objection should be withdrawn.

Rejections under 35 U.S.C. § 101

Claims 1-83 stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. The applicant respectfully requests that the Examiner reconsider and withdraw this ground of rejection in view of the following.

The Examiner found that the claims did not recite any pre- or post-computer activity, but merely perform a series of steps of receiving data and manipulating data. (Paper No. 03292006, page 2.) The Examiner suggested adding a step of "displaying" the selected retrieved items to the claims in order to overcome this rejection. (Paper No. 03292006, page 3.)

As discussed during the telephone interview, the undersigned has elected not to include the act of displaying since such an act might occur at the device of an end user rather than at a device of an entity serving ads or search results. The independent claims have, however, been amended to recite acts of (or means for) serving or transmitting the ads or items to a client device for rendering to a user. Since this requires physical acts, each of the claims now recites statutory subject matter.

During the telephone interview, SPE Stamber indicated that claims 44-46 had additional problems under 35 U.S.C. § 101. Since, however, these claims have been canceled, this ground of rejection is rendered moot.

Rejections under 35 U.S.C. § 102

Claims 1-7, 9-14, 31, 32, 34-39, 44-58, and 73-79 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Application Publication No. 2003/0078928 ("the Dorosario publication"). The applicant respectfully requests that the Examiner reconsider and withdraw this ground of rejection in view of the following.

As shown, for example, in the Example illustrated in Figure 16, embodiments consistent with the present invention may be used to search for items such as ads 1660 by accepting a query (e.g., iditarod 1620), finding related word(s) (e.g., alaska, dog sled, ... malamute 1634), and generating, automatically, a request including both the word in the original query, as well as the related word(s) (e.g., request 1640 including both iditarod and alaska, ... malamute).

Still referring to Figure 16, the items (e.g., ads) returned may be scored. The score of items returned in response to the related word(s) may be penalized relative to those returned in response to word(s) in the original query. For example, since ad A was returned in response to related word "alaska", its score is multiplied by a factor of 0.7 1692. Since, on the other hand, ad B was returned in response to the word "iditarod" from the original query 1620, its score is not penalized 1694.

The Dorosario publication is also used to serve ads. However, the Dorosario publication basically generates a list of preferred advertisement categories for a user by monitoring that user's search queries. (See, e.g., blocks 102, 104 and 106 of Figure 3.) Ads are also

associated with advertisement categories. (See, e.g., block 118 of Figure 3.) This list of preferred advertisement categories is then used to serve ads to the user that pertain to categories that the user should be interested in. (See, e.g., 120 and 122 of Figure 3.)

To generate the list of preferred advertisement categories for a user, the Dorosario publication may:

include a query monitoring process for **monitoring** the queries entered by a user. A query association process **associates** each monitored query with one or more predefined advertisement categories. A preference file maintenance process **maintains**, for each user, an advertisement preference file that specifies the predefined advertisement categories associated with each monitored query entered by the user. [Emphasis added.]

Paragraph [0005]. More specifically, the query may be parsed into chunks. The Dorosario publication may include:

a word association process for **associating** one of the plurality of predefined advertisement categories with one or more of the discrete chunks included in the query. The query association process includes a word categorization process for **categorizing** one or more of the discrete chunks included in the query into one of the plurality of predefined advertisement categories **if** it is determined that the one or more discrete chunks **is not currently associated with any of the plurality of predefined advertisement categories**. The query association process includes a word

recategorization process for **recategorizing** one or more of the discrete chunks included in the query into a different predefined advertisement category **if** it is determined that the existing association of the one or more discrete chunks with its predefined advertisement category **is no longer valid due to changes in the user's query patterns**. [Emphasis added.]

Paragraph [0009].

The Dorosario publication also introduces, generally, how search engines may work in paragraphs [0025]-[0037].

Having introduced both exemplary embodiments consistent with the claimed invention, as well as the Dorosario publication, at least some of the patentable features of the claims are now discussed.

Claims 1-6, 31, 47-52 and 73

Independent claims 1, 31, 47 and 73, as amended, are not anticipated by the Dorosario publication because the Dorosario publication does not teach an act of, or means for, **automatically** generating an ad request including both (i) a word included in an accepted search query (recall, e.g., "iditarod" in Figure 16), and (ii) one or more words determined to be related to the word included in the accepted search query (recall, e.g., "alaska", "dog sled", ..., "malamute" in Figure 16.).

The Examiner cites paragraphs 36 and 41-43 of the Dorosario publication as teaching this feature. (See Paper No. 03292006, page 3.) Paragraph [0036] of the

Dorosario publication illustrates how to resolve an ambiguous query word, such as "Saturn" which might pertain to the planet, the car, or the video game. The Dorosario publication discusses presenting suggestions to a user, and modifying (effectively narrowing) the search according to the selection made by the user. Thus, although the Dorosario publication may be used to modify a search query with supplemental search terms, it does not do so *automatically*, but rather requires user selection.

Paragraphs [0041]-[0043] of the Dorosario publication discuss associating words or phrases (e.g., chunks) of a user query with advertisement categories. As an example, "german sheppard" may be associated with the category "dogs". These categories then populate a user's preferred ad preference file, which is a list of predefined ad categories to which the user's past queries (or portions thereof) belong. These categories, but apparently not the original search query terms, are used to target ads. Thus, even if these categories (e.g., "dog") can be characterized as words related to words of the search query (e.g., "german sheppard"), the Dorosario publication apparently only uses the category, but apparently does not use the original search query, to retrieve ads. For example, the Dorosario publication states:

advertisement targeting process 34
allows for the creation and maintenance
of an *advertisement preference files* 48
for each user 10 entering a query 40
into search engine 20. These
advertisement preference files specify
the areas of interest for that

particular user. Accordingly, by understanding the areas in which a particular user is interested, **area-specific advertising can be targeted and transmitted to that user.** Advertisement targeting process 34 includes a file repository process 80 for storing **advertisements grouped in accordance with predefined advertisement categories** 44. Thus, if user 10 runs a considerable number of searches (i.e. executes queries) relating to automobiles, they are most-likely a car enthusiast. Therefore, advertisement preference file 48 would specify an area of interest for user 10 as being **automobiles**. Therefore, user 10 would probably be interested in seeing ads relating to various automobiles and automobile related products (e.g., automotive accessories, high performance driving schools, etc.).

An advertisement transmission process 82 processes the advertisement preference file 48 for user 10, **retrieves the appropriate category-specific advertisements from advertisement repository** 80 and transmits these advertisements to user 10 so they can be viewed/heard on user's computer 38. [Emphasis added.]

Paragraphs [0065] and [0066].

As can be appreciated from the foregoing, the cited portions of the Dorosario publication do not teach an act of, or means for, **automatically** generating an ad request (a user selection is required in paragraph [0036] of the Dorosario publication) including **both** (i) a word included in an accepted search query, **and** (ii) one or more words determined to be related to the word included in the accepted search query (apparently, only the category, not

the original query terms, is used to retrieve ads in the Dorosario publication). Thus, independent claims 1, 31, 47 and 73 are not anticipated by the Dorosario publication for at least this reason. Since claims 2-6 depend, either directly or indirectly, from claim 1, and since claims 48-52 depend, either directly or indirectly, from claim 47, these claims are similarly not anticipated by the Dorosario publication.

Claims 7-14, 32, 34-39, 53-57 and 74-79

Independent claims 7 and 53 are not anticipated by the Dorosario publication because the Dorosario publication does not teach an act of, or means for, adjusting the scores of any items retrieved on the basis of the one or more words determined to be related to the word included in the accepted search query (e.g., a score of ad A, retrieved due to "alaska", is multiplied by 0.7 in Figure 16) relative to any items retrieved on the basis of the word included in the accepted search query (e.g., the score of ad B, which is retrieved due to "iditarod", is not adjusted in Figure 16). Similarly, independent claims 32 and 74 are not anticipated by the Dorosario publication because the Dorosario publication does not teach an act of, or means for, determining a score for each of a number of retrieved items, wherein a score component is adjusted for any items retrieved on the basis of the one or more words determined to be related to the word included in the accepted search query e.g., a score of ad A, retrieved due to "alaska", is determined using adjustment factor 0.7 in Figure 16) relative to any items retrieved on the basis of the word

included in the accepted search query (e.g., the score of ad B, which is retrieved due to "iditarod", is not adjusted in Figure 16). As discussed during the telephone interview, some embodiments consistent with the present invention adjust a previously determined score (See, e.g., 690 of Figure 6.), while in other embodiments consistent with the present invention, the score is effectively adjusted during its determination (See, e.g., 535 and 550 of Figure 5.)

The Examiner cites paragraph [0044] of the Dorosario publication as teaching this feature. (See Paper No. 03292006, page 5.) However, this section of the Dorosario publication concerns automatic categorization methods for categorizing previously uncharacterized words into categories. Thus, predefined advertisement categories can change and evolve. As one example, the category "baseball" might initially include the names of all present major league baseball teams. However, this category might evolve to later include the names of expansion teams. Although not mentioned in the cited section, the categorization of a word or phrase may change over time. For example, the term "titantic" might be initially categorized under "history", but might later be categorized under "entertainment". (See, e.g., paragraph [0054].)

In any event, neither the automated categorization techniques, nor the fact that words may be recategorized, teach adjusting a score, or influencing the scoring, of items retrieved on the basis of an item request including a word included in an accepted search query and one or more words determined to be related to the word included in the accepted search query such that any items

retrieved on the basis of the one or more words determined to be related to the word included in the accepted search query are treated differently than any items retrieved on the basis of the word included in the accepted search query.

During the telephone interview, Examiner Nguyen and SPE Stamber seemed to appreciate this feature, and how it differed from the Dorosario publication, particularly when understood in the context of the example of Figure 16. SPE Stamber suggested reciting that the ads are scored differently depending on whether they were found due to the term in the original query, or due to a related word. The undersigned explained that the claims already included this type of recitation and agreed to discuss the recitations with respect to the example set forth in Figure 16. The applicant has done so. Naturally, the applicant reminds the Examiner that the claims are intended to be broader than various specific embodiments described in the specification, such as that described with reference to Figure 16. The applicant notes, however, the dependent claims 9 and 34 further define that the score or score component is adjusted using a multiplier that is less than 1.0. (Recall that the score of ad A includes the factor 0.7.)

Therefore, independent claims 7, 32, 53 and 74 are not anticipated by the Dorosario patent for at least the foregoing reason. Since claims 9-13 depend, either directly or indirectly, from claim 7, since claims 34-39 depend, either directly or indirectly, from claim 32, since claims 54-58 depend, either directly or indirectly, from claim 53, and since claims 75-79 depend, either

directly or indirectly, from claim 74, these claims are similarly not anticipated by the Dorosario patent.

Rejections under 35 U.S.C. § 103

Claims 8, 19-26, 33 and 63-68 stand rejected under 35 U.S.C. § 103 as being unpatentable over the Dorosario publication. The applicant respectfully requests that the Examiner reconsider and withdraw this ground of rejection in view of the following.

In addressing claims 8, 20 and 33, the Examiner concedes that the Dorosario publication does not disclose decreasing a score. However, the Examiner concludes that this is simply a design choice given little, if any, patentable weight, and that it would have been obvious to modify the Dorosario publication to "decrease the score". (See Paper No. 03292006, page 9.) The applicant respectfully disagrees.

First, the Dorosario publication does not teach adjusting scores (or score components) of any items retrieved on the basis of the one or more words determined to be related to the word included in the accepted search query (e.g., a score of ad A, retrieved due to "alaska", is multiplied by 0.7 in Figure 16) relative to any items retrieved on the basis of the word included in the accepted search query (e.g., the score of ad B, which is retrieved due to "iditarod", is not adjusted in Figure 16). This is not a "mere design choice". Rather, this serves to penalize items retrieved due to words related to words in a search query relative to items retrieved due to the words in the search query itself. Moreover, the portions of the Dorosario

publication cited as teaching the proposed modification, modify categories (which may be used to retrieve ads), not scores of items retrieved. Thus, claims 8, 20 and 33 are not rendered obvious by the Dorosario publication for at least this reason (in addition to the reasons discussed above with respect to independent claims 7 and 32).

Independent claims 19 and 63 (and therefore dependent claims 20-26 and 64-68) are not rendered obvious for at least the reasons discussed above with reference to similar claims 7 and 53. The Dorosario does not suggest modifications that compensate for the differences discussed above.

Claims 15-17, 27-29, 40-42, 59-61, 69-71 and 80-82 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the Dorosario publication in view of U.S. Patent Application Publication No. 2002/0059094 ("the Hosea patent"). The applicant respectfully requests that the Examiner reconsider and withdraw this ground of rejection in view of the following.

The Examiner concedes that the Dorosario publication does not teach updating a multiplier using the formula:

$$updated_multiplier = \frac{N \bullet initial_multiplier + observed_user_behavior}{N + naively_predicted_user_behavior}$$

To compensate for this admitted deficiency, the Examiner relies on the Hosea publication as teaching an adaptive profiling algorithm, and concludes that it would have been obvious to use this feature of the Hosea publication to modify the Dorosario publication. (See Paper No. 03292006, page 12.)

First, even assuming, arguendo, that the Hosea publication includes the purported teaching, and further assuming, arguendo, that one skilled in the art would have been motivated to modify these references as proposed by the Examiner, the result would still not compensate for the deficiencies of the Dorosario publication with respect to claims 7, 19, 32, 53, 63 and 74, discussed above. Thus, these claims are not rendered obvious by the Dorosario and Hosea publications for at least this reason.

Second, the algorithm discussed in cited paragraph [0043] of the Hosea publication is different from that claimed. Thus, these claims are not rendered obvious by the Dorosario and Hosea publications for at least this additional reason.

Claims 18, 30, 43, 62, 72 and 83 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the Dorosario publication in view of U.S. Patent No. 6,907,566 ("the McElfresh patent"). The applicant respectfully requests that the Examiner reconsider and withdraw this ground of rejection in view of the following.

The Examiner concedes that the Dorosario publication does not disclose that retrieved items are advertisements wherein the act of determining a score of advertisements uses ad performance information and ad price information. To compensate for this admitted deficiency, the Examiner relies on the McElfresh patent. (See Paper No. 03292006, page 13.) Even assuming, arguendo, that the McElfresh patent includes the purported teaching, and further assuming, arguendo, that one skilled in the art would

have been motivated to modify these references as proposed by the Examiner, the result would still not compensate for the deficiencies of the Dorosario publication with respect to claims 7, 19, 32, 53, 63 and 74, discussed above. Thus, these claims are not rendered obvious by the Dorosario publication and McElfresh patent for at least this reason.

New claims


New claims 84, 85 and 86 depend from claims 1, 7 and 31 respectively, and further recite that the act of retrieving ads (or items) using the ad request retrieves ads relevant to **any one of** the words of the generated ad request. That is, the matching is relaxed. This further distinguishes these claims from paragraph [0036] of the Dorosario publication which serves to restrict, rather than broaden or relax, the search.

Conclusion

In view of the foregoing amendments and remarks, the applicant respectfully submits that the pending claims are in condition for allowance. Accordingly, the applicants request that the Examiner pass this application to issue.

Respectfully submitted,

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CERTIFICATE OF MAILING under 37 C.F.R. 1.8(a)

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